

XI.—*The Birds of Ireland*. By WM. THOMPSON, Esq., Vice-Pres. Nat. Hist. Society of Belfast.

[Continued from vol. ix. p. 381.]

No. 13.—*Hirundinidæ* (continued).

THE HOUSE MARTIN, *Hirundo urbica*, Linn., is much more choice in his haunts than the swallow, and consequently is by no means so generally distributed over Ireland: in some of the less improved districts it may even be called a local species*.

This species is, according to my observation, invariably later in its arrival in the north of Ireland than either the sand martin or the swallow, and generally appears about the middle of April †.

The "trim and neat" style of the generality of houses erected in the north of Ireland of late years does not present such facility for the nests of the martin as that of an older date, not only the "but-tress and coign of vantage" being wanting, but the less feudal, though to the martin equally useful appendage—the antiquated holdfast of the wooden spout, upon which its mud fabric was wont to be raised, and which afforded "ample room and verge enough" for the nest between its base and the spout that it supported. When in Ballymena in July 1833, I observed the predilection of the martin for the older houses to be so strongly marked, that against those in the older part of the town their nests were numerous, while not one was to be seen about any of the erections of late years. With reference to this propensity a second instance may be mentioned, which at the same time suggests another cause that to a certain extent influences the choice of site—that the martin is prone to return to its birth-place ‡. During a week's stay in the summer of 1833 in the picturesque sea-bathing village of Portstewart (co. Londonderry), which had been lately built, not one of these martins appeared, though the place was

* In Scotland, on the other hand, the house martin, according to Mr. Macgillivray, "is more widely dispersed" than the swallow.—British Birds, vol. iii. p. 575.

† Mr. Blackwall states that the average time of the martin's appearance at Manchester is the 25th of April, as that of the swallow is the 15th of the same month. It is observed by Mr. Hepburn, that "the house martin arrives at the village of Linton on the Tyne in the last week of April, though in 1839 a few were seen by the 17th of that month."—Macgillivray's British Birds, vol. iii. p. 580. In the same work, p. 592, it is mentioned, on the authority of David Falconer, Esq., "that for the very long period of forty successive years, a pair of them had come to Carlwrie either upon the 22nd or 23rd of April."

‡ Mr. Jesse, in the second series of his 'Gleanings in Natural History,' gives the following extract from the unpublished journal of White of Selborne:—"July 6, 1783. Some young martins came out of the nest over the garden door. This nest was built in 1777, and has been used ever since." A friend has remarked that a nest built against a spout-head in York-street, Belfast, was occupied for four years successively. By Capt. King, R.N., and Mr. Weir, it has been proved that the same birds return annually to the same locality.—See Macgillivray's British Birds, vol. iii. p. 592.

in many respects peculiarly suited to them. Although they had not taken up their abode there, yet in the high and time-worn precipices which rise above the ocean at only a short distance to the eastward of the village, martins were always to be seen, seeming especially graceful as they glided to and from their nests, beneath the summit of the stupendous basaltic arch that rises at the base of the isolated rock on which the ruin of a castle is situated—a locality which I understood they had always frequented.

This *Hirundo* is so partial to the noble basaltic precipices which form the leading features of the north-east coast of Ireland, as in the more genial seasons of the year to be ever seen about them. Throughout their entire range, and against their gloomy cliffs, “its pendent bed” is erected*. About the sea-girt rocks of the peninsula of the Horn in Donegal, those near to Ardmore in the county of Waterford, and other similar localities, I have remarked its presence †. Martins occasionally build against the arch of the bridge. Toome bridge (over the Bann) contained a great many of their nests in 1834, and for a long period is said to have been a favourite haunt: the most lofty edifices are also selected for this purpose.

“It has been observed (says White, in the sixteenth letter of his ‘Natural History of Selborne’) that martins usually build to a north-east or north-west aspect, that the heat of the sun may not crack and destroy their nests; but instances are also remembered where they bred for many years in vast abundance in a hot, stifed inn-yard, against a wall facing to the south.” On this subject the following note was made on the 15th July, 1832:—I this day observed twelve or thirteen nests of the *Hirundo urbica* built against a two-story house at Wolfhill. These were all on the north-west side or front, excepting one, which was at the north-east corner. The other two sides of this house have in part a southerly exposure (S.W. and S.E.), and being fenced in are consequently more private (a road passing those preferred by the martin)—on every side the facilities for its building operations are the same. In front of a thatched

* Dr. J. D. Marshall, in his memoir ‘On the Statistics and Natural History of the Island of Rathlin,’ remarks, that the house martin “is the most numerous of the genus in Rathlin, where it is found in all parts of the island, as well inland as along the cliffs which overhang the sea.” Those preferred for nesting are said to be “the range of white [limestone] cliffs running along the north-western side of Church Bay.” In rocks of a similar kind, but in a very different scene, I myself observed a great number of the nests of the martin in June 1835. This was in the chalk-cliffs which rise above the river Derwent, near the village of Cromford in Derbyshire. The nests were built in as far as possible beneath the hanging rocks, in the same manner that they are under a projecting roof.

Dr. Marshall, in the same memoir, mentions that one of these birds which he shot “had its mouth completely filled with insects, among which were a large dragon-fly and one of the *Tipulæ* [*T. oleracea*].” White of Selborne states that swifts and sand martins feed on *Libellulæ*.

† “They breed in the Pyrenees in the rocks in vast numbers, as in the Alps, often far from the habitation of man.”—Cook’s Sketches in Spain, vol. ii. p. 275.

cottage not more than eight feet high, and which is not only at the side of the highway, but constantly resorted to as a public-house, I remarked several nests of the martin. In the rear of this cottage, which is fenced off from the road, and its walls (from the building being on the side of a hill) considerably higher than in front, none of the nests appear. I recollect that some years ago this species built annually in front of the dwelling-house at Wolfhill, not more than a single nest occupying either gable; and that in considerable numbers their nests were displayed in front of two lofty houses in Belfast. Judging from the situations selected by the martin for its nests on these five houses (the three first mentioned being only a few hundred yards apart), it would seem that the bird is more influenced by the front of a house than by aspect, as the first faces the north-west, the second and third the south-east, and the fourth and fifth the south. In innumerable other instances I have remarked that where facilities for building are similar on all sides the house, the front was thus preferred by the martin, although the nests were opposite every point of the compass, a fact which is particularly apparent in houses situated in streets which intersect each other at right angles. The aspect of the cliffs before mentioned as being tenanted by the martin is as different as that of the houses. One reason why the fronts of houses are thus preferred (and in the instances mentioned we find them to be equally so from the low cottage to the four-story house) is probably on account of the more open space in front allowing of a freer range of flight to and from the nest.

Mr. Selby remarks of this species, that the nest "is closed all around, except a small orifice, usually on the most sheltered side," &c. My observation on the side of the nest chosen for entrance in the north of Ireland does not accord with this, as in nests closely adjoining I find the aperture on every side; as an instance of which it may be mentioned, that of nine nests in front of a house before alluded to, the entrance appeared on the north, south, and west sides, the wall against which they were placed occupying the eastern. On this house—as is not unfrequently the case—several of these architects had, like certain other bipeds when erecting their habitations, taken advantage of their neighbours' gables, and it may be presumed, for a similar reason—that of being saved trouble and expense of labour. All the nests of the martin that I recollect to have seen, with a solitary exception, had the entrance close to the top; but in this instance, although the nest was built against the wall of the house, and beneath a projecting roof, the aperture was placed rather above the centre, in the same manner as that of the wren (*Troglodytes Europæus*). The entrances to other nests on the same house (which is four stories in height) were as usual.

Although the nest of the poor martin is often in this part of the country torn away from the houses of persons who imagine themselves to be possessed of good taste, yet there are others, who, disliking the harsh contrast between its clay-built shed and the snow-white walls of their mansions, and unwilling at the same time to

disturb the summer wanderer, have, for the sake of uniformity, had its domicile whitewashed at the same time with their own. I first noticed this in the town of Antrim, where on two houses several nests thus appeared, and was pleased to see their architects flying in and out, thus evincing their contentment with the change. In Hillsborough I afterwards remarked that the same practice had been adopted.

The statement of several continental authors, that house martins, on finding sparrows in possession of their nests, had been known to rise *en masse*, and fill up the entrance when the intruders were within, would seem from the silence of some of the latest British writers of authority on the subject, not to be credited by them. The compiler of the 'Architecture of Birds' sets it down as a "fanciful legend;" but I have unquestionable testimony that a case precisely similar to those related by the authors alluded to, occurred in the next farm to our own, near Belfast, in 1832.

When the house martin returned in that year to a long thatched cottage (belonging to Mr. John Clements) where they had built for many years (and which in that year displayed fourteen of their nests), a pair found that sparrows had taken possession of their domicile. On perceiving this, they kept up such "a chattering about the nest" as to attract the attention of the owner of the house. After its continuance for some time, apparently until they were convinced that the sparrow was determined to retain possession, they flew away, and did not return for a considerable time, when they re-appeared with about twenty of their kindred. With their assistance they immediately commenced "claying up the entrance to the nest." This was done in the course of the day, and next morning the pair of martins commenced the construction of a new nest against the side of their old one, and in it, undisturbed, reared their brood. After some time, the proprietor of the cottage, who had never heard of any similar case, had the curiosity to pull down both nests, and in that occupied by the sparrow found its "rotten corpse," together with several eggs. A particular note of the entire proceeding, as related by Mr. Clements, was made by my brother soon after the occurrence; but to make "assurance doubly sure" before publishing the account, I inquired today (November 2, 1841) of the same person whether he remembered such a circumstance, when he repeated it just as narrated nine years before. Some other persons too of our mutual acquaintance were witness to the chief parts of the proceeding, and saw the sparrow and its eggs in the sealed-up nest*.

What appears to me the most singular feature in this case is, that the sparrow would remain in the nest, and allow itself to be entombed alive; but this bird was sitting on the full complement of eggs, and which were probably in the last stage of incubation, when we know that some birds leave the nest only to procure such a scanty

* Three recent occurrences of a similar nature are recorded by Mr. Weir (Macgillivray, *British Birds*, vol. iii. p. 591), and two others are alluded to under the head of "Swallow" by the Bishop of Norwich, in his 'Familiar History of Birds,' vol. ii. p. 55, 3rd edition.

morsel as will barely support life, and will occasionally allow themselves to be lifted off their eggs, and when placed on again, continue to sit as intently as if they had not been disturbed. The filling up of the aperture is not in itself a singular proceeding on the part of the martin*; but on this occasion, when the assistance of their neighbours was called in, would almost seem to be intended as an act of retributive justice on the sparrow. Their building against the side of the old nest is quite a common occurrence.

I have heard the call of this species exerted to the no little annoyance of persons engaged in the cruel task of pulling down their nests, when the sufferers become as vociferous as their "weak voices" will permit, and thereby attract their neighbours from all quarters, who make common cause with them, each and all endeavouring to deter the spoiler from his work of destruction, "occasionally flying boldly and at the risk of their lives within reach of his outstretched hand; and again, with all the eloquence they can master, seeming most piteously to claim the edifice as theirs †." Martins are generally silent birds, but when congregated for migration their call is often almost incessantly uttered.

This species generally rears two broods during its sojourn. So late as the 23rd of September several old birds were observed to fly so repeatedly to their nests, that I had no doubt they at the time contained young †. The second brood is generally reared in the same nest as the first, but it is probable that when the nest is not found suitable for the purpose, a second erection is undertaken, as on the 17th of July I remarked seven nests in front of a house, which in the month of October contained nine.

Notes in illustration of Mr. White's remark ('Hist. of Selborne,' letter 18), that the young swallows "at once associate with the first broods of the house martins, and with them congregate, clustering on sunny roofs, towers, and trees," need not be offered; but it may

* Mr. Blackwall, in his 'Researches in Zoology,' states that a pair of martins, on returning in the spring to the nest of the preceding year, endeavoured to dislodge the bodies of their young, which had been deserted; but finding their efforts in vain, "closed up the aperture with clay, thus converting the nest into a sepulchre."

† Audubon (Ann. of Lyc., vol. i. p. 165) mentions a similar trait in the history of an American species, the *Hirundo fulva*, in the following words:—"The energy with which they defended their nests was truly astonishing. Although I had taken precaution to visit their nests at sunset, when I had supposed they would all have been on the sycamores, yet a single female happened to be sitting, and she gave the alarm, which immediately called out the whole tribe. They snapped at my hat, my body, and my legs, passed between me and the nests within an inch of my face, twittering their rage and sorrow. They continued their attacks as I descended, and accompanied me some distance."

‡ In a note contributed to Mr. Bennett's edition of White's 'Selborne,' p. 61, a particular instance is detailed of a pair of martins remaining behind for the purpose of bringing their progeny to adolescence, instead of migrating with the great body of their companions. That the young are often deserted at such times by their parents, has been fully proved by Mr. Blackwall.

possibly be worth observing, that more than once the martin has been noticed by me in company with the swallow in autumn, at places remote from its breeding-haunts. When with Mr. Wm. Sinclair at the Falls, on the 6th of September 1832, immense numbers of both species were seen in company, and flying so close to the ground as occasionally to stop for a moment, and apparently take their food from the very grass. They also alighted in multitudes on the fruit-trees in the garden, and notwithstanding their decided predilection for perching on dead branches, they on this occasion chose especially for that purpose two large cherry-trees in full foliage. Amongst these birds appeared a solitary sand martin, a species which, as well as the martin, was never before seen about the place, and near to which neither species has any nestling-place. From observing the swallow and the martin thus congregated for some time previous to migration, I have little doubt, great as is the disparity in their powers of flight, that they often leave this country together; indeed both species have been observed to alight in company on vessels very far out at sea*.

Respecting the separate migration of the martin, it may be mentioned, that on the 24th of September 1834, when about Toome bridge, I observed about a hundred of these birds congregated, no other species of *Hirundo* being in the vicinity; and on the eighth of October, when riding near Belfast, a very strong south-west wind prevailing, about twenty martins in a loose flock flew across the road, and proceeded for some time against the wind, at not more than from fifteen to twenty yards' distance from the ground. They, probably from feeling the wind too strong against them, at length wheeled about, rose very rapidly until they attained a great elevation, and in the act of still mounting higher disappeared from my sight, all this time having the wind with them. These birds were believed to be migrating. Feeling the effects of a powerful contrary wind, they may, as some persons believe the *Hirundines* generally to do, have ascended thus high in search of a more favourable current. On this occasion, however, they may not have been successful, as the clouds (which were moderately high) were borne onwards in the same direction as the wind which swept the earth.

The martin is generally stated to remain to a later period in England than the swallow, but I do not recollect any year in which the swallow was not the last of its genus to depart from the north of Ireland.

In the spring and summer of 1841 I observed the house martin as follows:—When sailing from Malta to the Morea, and about fifty miles from Cape Passaro (the nearest land), on the 23rd of April, one of these birds flew into the cabin, and died soon afterwards: it had not met with any molestation on board. No more were seen until the morning of the 27th, when, nearly one hundred miles west of the Morea, a few appeared, and remained through the early part of the day, confining their flight to the lee side of the ship: in the afternoon

* C. L. Bonaparte in Zool. Journ., and Bloxham in Mag. Nat. Hist.

still more were seen hawking about in company with *Hir. rustica*; as flies were numerous, they probably obtained plenty of food: at four o'clock p.m. all were gone. On the 30th of April this species was just commencing nest-building against the houses in the town of Navarino; in May I remarked it to be common about Smyrna; in June at Patras, where it was as usual building against the houses in the town; at Trieste in the same month it was numerous, as it likewise was in July about Venice, Verona, and Milan—in the last city having fine nestling-places about the magnificent Arch of Peace, where its “cradle” was supported on the sculptured leaves adorning the ceiling of the gateway. This notice, compared with that of the swallow, as seen during the same tour, shows that, as in our own northern climate, the *H. rustica* is much more generally distributed than the *H. urbica*.

The most complete history of this species, as observed in the British Islands, appears in the third volume of Macgillivray's ‘British Birds,’ where the author and his contributors, Mr. Hepburn and Mr. Weir, each and all treat very fully of it from personal observation, the two latter gentlemen having watched its progress of nest-building, frequency of feeding young, &c., with the most praiseworthy and extraordinary patience.

SAND MARTIN, *Hirundo riparia*. Linn. As the swallow is much more abundant than the house martin in Ireland, so again is that species considerably more numerous than the sand martin:—the last is everywhere a local species. It resorts to suitable places in all quarters of the island.

The sand martin arrives the earliest of the *Hirundinidæ* in the north of Ireland, appearing occasionally at the latter end of the month of March. In 1828 several were seen in a mountainous situation near Belfast by Mr. Wm. Sinclair and myself, on the 29th of that month, and when pointed out to the respectable farmer at whose place they appeared, he assured us they had been seen there several days before that time.

The observation of the eloquent Wilson (Amer. Ornit.), that the sand martin “appears to be the most sociable with its kind and the least intimate with man of all our swallows,” has been objected to as erroneous*, but my observation leads me to consider it as critically correct. Although the sand martin never tenants the swift's favourite abode, the tower or the steeple, attaches not its nest to our dwellings like the martin, nor with the swallow claims the roof of our out-houses for its protection, yet it is in a considerable degree benefited by the operations of man. The excavations in the sand-pit are, when carried to such an extent as to form a high perpendicular front, the means of affording to this bird a place to rear its young in comparative security, and it appears to me that such banks are selected, whether adjacent to or remote from houses, solely from their adaptation to its purposes, and not because it either seeks or “shuns human neighbourhood.” The species is as partial to the precipitous

* Rennie, in his edition of Montagu's Orn. Dict. p. 20.

banks which in the very wildest localities rise in picturesque beauty above the river or the lake, as to the stratum of sand which overlies the quarry, or to the sand-pit, where the respective operations of quarrying for stone or excavating for sand are daily in progress.

To the banks of a spacious sand-pit close to the old Malone road, and within a mile of Belfast, a colony of these birds annually repair. Here, in consequence of the sand being in great demand for building purposes, they have the labour of making entirely new excavations for their nests at least once, and occasionally twice, in the season. So great is the demand for this sand, that although the excavation made by the bird will, when the bank is soft, sometimes extend five feet inward, I have known the bank colonized by it to be required for use before the first brood had escaped; and in such case, the labour of forming a second burrow in the same season was commenced.

On the 29th of April 1832, an observant friend informed me, that, of the sand martins' excavations in this place, thirty-two were then made, and that about three days afterwards two more appeared; he also observed the birds employed in carrying hay and feathers into them. When visiting this place on the 18th September of the same year, I reckoned seventy of the perforations of this species.

May 18, 1833.—On the south side of the Malone sand-pit, the sand martins have, since their arrival this season, excavated above eighty holes towards the top of the bank*, some of them not more than two inches apart, although there is an abundance of room; so much indeed that the colony does not occupy more than one-fiftieth part of the bank suitable for their nests.

May 27, 1833.—No excavations have been made here by the sand martin since the 18th inst. †

Of the places around Belfast resorted to by this species, are two, differing much in character; the one a portion of the bank of the

* In this locality, where the birds have a choice of banks from thirty to forty feet in height, and the sand is of a similar nature throughout, they always select situations where they are most out of the reach of enemies of all kinds; so that it cannot here be said that "they exercise their propensity [for boring] without reflection."—Macgillivray's Brit. Birds, vol. iii. p. 599. Where they have not thus had a choice, I have frequently seen their burrows in places where they were subject to be destroyed.

† Sand martins were a full month later than usual in their arrival in the north of Ireland in the spring of 1836 (when all the spring migrants were late), and but comparatively few made their appearance even then. The sand-pit above alluded to, and their chief haunt in the neighbourhood of Belfast, was entirely deserted by them in the summer of that year; and, from the progress of the excavation, not a burrow of the preceding season remained to denote that the species had ever been there. In 1837 I omitted to look after them, but in 1838 they were in numbers here as usual. On visiting the locality on the evening of the 11th of May I saw not less than sixty of these birds flying about, and so many were giving utterance to their feeble note, as to produce a considerable noise. Their burrows of this season were scattered over the entire eastern façade of the sand-pit; and, as usual, all placed near to the top of the bank. At the entrance to three of these holes sparrows were stationed.

river Lagan, elevated not more than six feet above the usual level of the water; the other, a stratum of hard sand only a few feet in thickness, overlying the limestone of an extensive quarry, at an elevation of about 600 feet above the sea; but at these places a few pairs only breed*.

Where banks suitable to the mining operations of the sand martin offer a secure abode in the vicinity of Lough Neagh, the species, as may be inferred from its partiality to water, is abundant. The precipitous sandy banks rising above this vast expanse of waters in Massareene deer-park, near Langford Lodge, and at Glenavy river †, three localities within the distance of a few miles, are resorted to by great numbers.

These birds are so widely distributed over Ireland, in similar situations to those described, that it would be needless to particularise them any further. The most exposed locality in which I have noticed them was about the banks where the river Bush joins the ocean near the Giants' Causeway ‡.

When at the Malone sand-pit on the 18th of September 1832, no sand martins appeared. Upon inquiry I learned that the whole colony, excepting a very few birds, had taken their departure about a fortnight before that time. When here on the 1st of October 1833, I was informed that they had departed ten or twelve days previously §. In both years, after the great body of these birds had mi-

* September 1840.—The latter locality has for some years past been entirely deserted.

† Where this river falls into Lough Neagh, Mr. Hyndman, on the 16th of August 1836, remarked several hundreds of these birds congregated, and that about fifty at a time would alight on the beach of the lake, which is there earthy and gravelly. It was very stormy, and the wind blowing upon the shore. The birds did not appear to be feeding when on the ground. Sir Wm. Jardine witnessed a proceeding, similar in some respects, which he relates in the following words: "We once observed many hundreds of the sand martin resting on the sands of the Solway Firth, upon a space not exceeding two acres; a small stream entered the sea, and they seemed partly resting and washing, and partly feeding on a small fly that had apparently come newly to existence, and covered the sands in immense profusion."

‡ Of the seven burrows of sand martins in the county of Antrim, noticed in this paper, five are contiguous to water, to which I believe the species to be partial, although, to use the words of Mr. Macgillivray, they "take up their abode in situations favourable to mining, whether there be water near them or not."

§ On a visit to this place on the 10th of September 1840, not a bird was to be seen, but less than a mile distant I saw several associated with house martins and swallows, of which the latter especially were abundant. The burrows of the sand martin here, this year, are fewer than ever known to me, except in 1836, when there were none at all. Now there are but a few holes at the western and at the southern side, about a dozen at each place. The repeated injuries these poor birds have suffered here, from the banks where they nested being excavated during their stay, led me to believe that they might have changed their quarters, but in the present season (1842) they are as numerous as ever. They were very late in arrival this year, but all at once on the 25th of April the whole colony—about seventy in number—appeared.

grated, I remarked a single individual, in one instance associated with the swallow, and in another with the martin and it together; and in both cases remote from their burrows. They alighted on houses and trees along with their congeners, as well as accompanied them in flight. In neither year were these sand martins seen after the other species were gone, whence it may be presumed that they set out with them on their migration.

Aristotle mentions the sand martin as frequenting the valleys of Greece, and it was with much gratification that in the first valley, or rather defile, of the Morea visited by me, I saw several of them. This was on the 30th of April, when walking between Navarino and Modon.

Audubon gives a very full and interesting account of this bird as an American species. In Macgillivray's 'British Birds' (vol. iii.) is a very good description of it by the author, enriched by valuable contributions from Mr. Weir and Mr. Duncan.

[To be continued.]

XII.—*Information respecting Scientific Travellers.*

In a letter to a friend in Belfast, dated Syra, June 27, 1842, Mr. Forbes says:—

“This is the first opportunity I have had of writing to you, or any one else, since the end of February. After the *Beacon* left Xanthus, Spratt, Daniell, and I, struck into the interior, and wandered about Lycia in all directions until the first week in June. During all that time we had no communication with Europe, and heard no news of any kind—were even completely shut out of the world; but our tour was so intensely interesting, that we did not miss it. Every day we discovered the ruins of cities which have long been lost, and the geological and botanical features of the country were of the highest interest. Daniell has written a letter to the ‘*Athenæum*,’ giving a notice of our antiquarian discoveries, so that I need not detail them here*.

“On arriving at Rhodes, after being as nearly lost as near could be, crossing the sea in a little Turkish caique, I found a parcel of letters***. After waiting seven days at Rhodes we took our passage in a caique for Syra. The second day I was seized with fever, and for eight days lay in a dreadful state in the hold of the caique without medicine or advice. At last a providential wind blew us to Syra, where finding the *Isabella* accidentally in the port we made application through the consul to put her in quarantine, and go to Paros. This was at first refused, but afterwards granted, and my life was saved, for if I had remained two days longer in the caique I should

* This appeared in a late number of the ‘*Athenæum*’; as in that of Aug. 6, did a notice of the winter tour of Mr. Forbes and Mr. Hoskin, communicated by the latter gentleman to the Geographical Society.